

REMARKS

Claims 1-13 have been examined in the present application. Claims 1-9, 12 and 13 have been rejected under 35 U.S.C. § 103(a) over Yamada (U.S. Pat. No. 6,008,440) in view of European Patent (EP 0711655 A2, hereinafter "EP 655"). Claims 10 and 11 have not been rejected. Claims 1, 2, 5-7, 10 and 12 have been amended hereby. Reconsideration of the present application in light of the above amendments and below remarks is respectfully requested.

On page 2 of the Office Action, claims 1-9, 12 and 13 have been rejected under § 103 over Yamada in view of EP 655. Applicants respectfully traverse this rejection.

The wood elements of independent claims 1, 10 and 12 are made by bonding at least two laminated bodies, or second laminated bodies (in dependent claim 5) to "have a thickness of 20mm or more". Each of the laminated bodies, or second laminated bodies in the independent claims has a density "in a range from 0.8 to 1.4 g/cm³" and a "thickness less than 20mm". Furthermore, the wooden plate units of each of the independent claims 1, 5, 10 and 12 are dyed.

The above mentioned features of the claimed present invention are suitable to the wood elements for musical instrument for the following reasons not taught or suggested by the prior art of record.

First, the manufacture of musical instruments, in particular, woodwind instruments such as clarinets, oboes, piccolos, and recorder, it is necessary for the wood elements to have thickness of 20 mm or more. (In the case of clarinets, the thickness of 40mm or more is necessary) because a tube of the woodwind instrument is carved from the wood element. When manufacturing wood elements having the thickness of 20mm or more by pressing a plurality of wooden plate units, it is difficult to apply the

pressure evenly over the entire laminated body. This makes it difficult to obtain wood elements having a uniform density and this makes defects such as cracks tend to occur because strong pressure is unevenly applied. To solve this problem, according to applicants present invention, laminated bodies are first formed to have a density in a range from 0.8 to 1.4 g/cm³ and a thickness less than 20 mm and, then, at least two of the laminated bodies are bonded together to form the wood elements having a desired thickness of 20mm or more. The wood elements thus obtained have a substantially uniform density and are suitable to use for musical instruments. This feature of the presently claimed invention is described in the present specification on at least page 11, lines 6-16).

Secondly, the tube of the wood wind instruments made from the wood element has cylindrical outer wall. It is preferable that the cylindrical outer wall has the same color. The tube is then formed with tone holes so that inner side walls of the tone holes are visible from outside. It is also preferable that the inner side walls have the same color as the cylindrical outer wall of the tube. That is, it is required that the wood element has the same color entirely in the direction of the thickness of the wood element. While it is possible to paint the outer cylindrical wall of the tube and the inner side walls of the tone holes with the same color, dying is more favorable because the paint may peel away. However, thick wood element cannot be entirely dyed with a uniform color because penetration of the dyes is limited.

In order to solve this problem, according to the claimed present invention, the wooden plate units are dyed before they are stacked and pressed to form the laminated body. Because dyeing is carried out to thin wooden plate units, the wooden plate units are uniformly dyed. As a result, the laminated bodies and the wood elements, which are formed by laminating the dyed wooden plate units, can have substantially uniform color entirely in the thickness direction and are suitable to use for musical instruments.

None of the cited references, Yamada and EP 655, teach the above structural feature mentioned above. Owing to the structural feature of the claimed present invention, unexpected results can be obtained in which it is possible to easily manufacture wood elements for musical instruments having the suitable density and E_L/G_{TL} value to cause the wood elements to have excellent vibration characteristics analogous to those of rare natural woods (such as granadilla). Withdrawal of the rejection of claims 1-9, 12 and 13 on the basis of Yamada and EP 655 is respectfully requested.

Applicants further note that as claims 10 and 11 have not been rejected in the present Office Action, it is assumed that these claims are condition for allowance and respectfully request an indication of the allowability of these claims. If claims 10 and 11 are rejected in the next action from the Office Applicants respectfully point out that such an action cannot be made Final as Applicants have not had the opportunity to address any rejections of claims 10 and 11.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: September 1, 2006

Respectfully submitted,

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Application No. 10/624,486
Amendment dated September 1, 2006

Docket No.: X2007.0134/0US0